



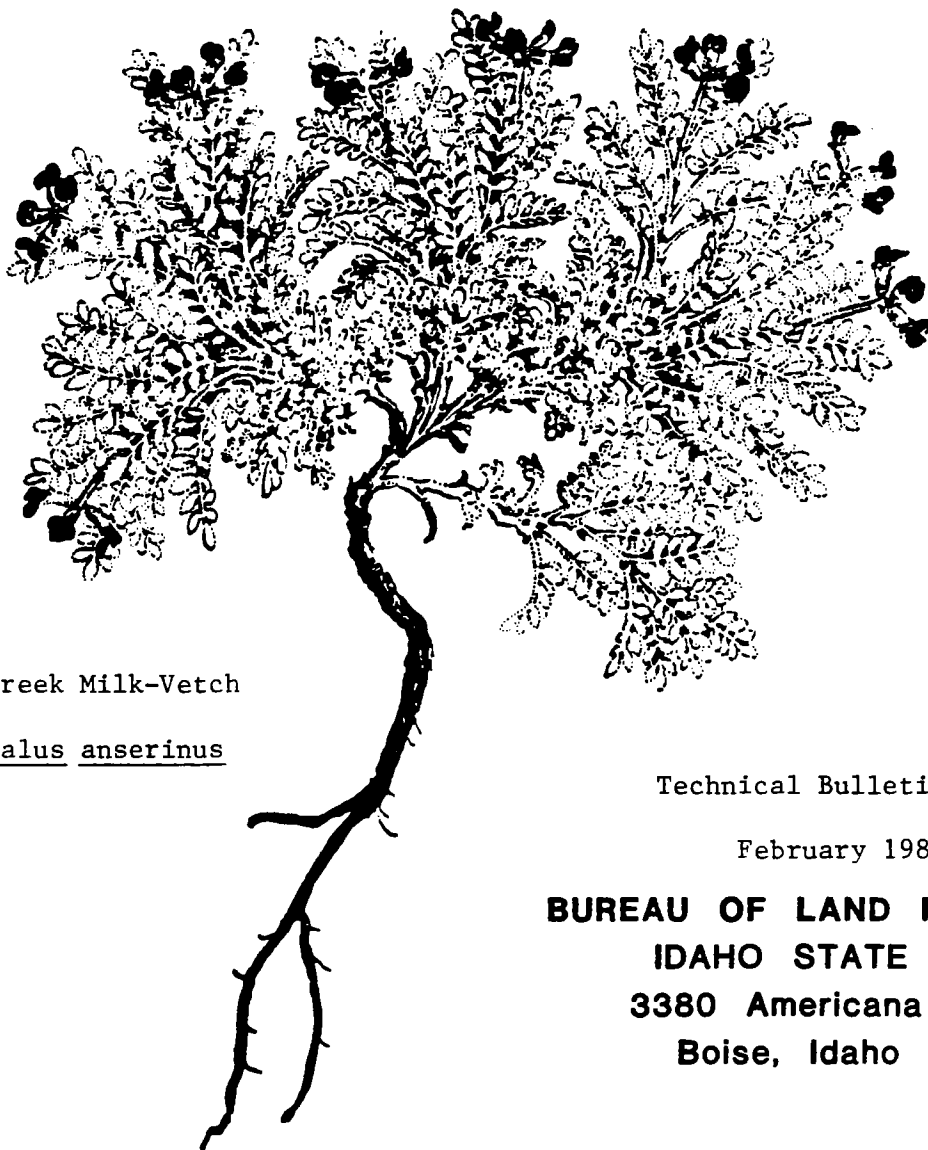
IDAHO BLM

TECHNICAL BULLETIN

AN ILLUSTRATED GUIDE TO THE
SENSITIVE PLANTS OF BURLEY DISTRICT
BUREAU OF LAND MANAGEMENT

by

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Goose Creek Milk-Vetch

Astragalus anserinus

Technical Bulletin 89-3

February 1989

BUREAU OF LAND MANAGEMENT
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INTRODUCTION

This Technical Bulletin was developed to familiarize Burley District field personnel with what sensitive plant species occur, or might occur, in their area. It is believed that it will help streamline the Environmental Assessment and clearance processes by providing a search image for most species, and by listing all current location data and habitat information.

No one flora covers this part of Idaho, as the "Literature Cited" section reveals. Rather, the region lies between four floristic units with distinct floras, namely, the Snake River Plains to the north, the Great Basin to the south, the Owyhee Uplift to the west, and the Albion Mountains to the east (Packard, et. al. 1979). The Salmon Falls Creek area, which is lower than lands to the east and west, appears to be a migration route for Great Basin species such as Allium anceps, Glyptopleura marginata, and Scutellaria nana. Unique edaphic (soil) conditions are prevalent throughout the district as well, and provide the habitat for most of the species of concern.

The plants are arranged in alphabetical order by genera. An index of common names has been included for those unfamiliar with scientific names. Plant nomenclature follows that of Hitchcock and Cronquist in the Flora of the Pacific Northwest (1973), and Cronquist, et. al. in the Intermountain Flora, Vols. 4 & 6 (1977, 1984). Illustrations are from a variety of sources including Flora of the Pacific Northwest, Intermountain Flora, Threatened and Endangered Vascular Plants of Oregon, "Brittonia", and the "Great Basin Naturalist".

LIST OF SENSITIVE PLANTS IN THE BURLEY DISTRICT

- Allium anceps* (Taper-Tip Onion)
- Astragalus anserinus* (Goose Creek Milk-Vetch)
- Astragalus atratus* var. *inseptus* (Mourning Milk-Vetch)
- Astragalus atratus* var. *owyheensis* (Owyhee Mourning Milk-Vetch)
- Astragalus tetraapterus* (Four-Wing Milk-Vetch)
- Castilleja christii* (Christ's Indian Paintbrush)
- Cymopterus davisii* (Davis Parsley)
- Epipactis gigantea* (Giant Helleborine)
- Eriogonum ochrocephalum* var. *sceptrum* (Ochre-Flowered Buckwheat)
- Glyptopleura marginata* (White Margined Wax Plant)
- Gymnosteris nudicaulis* (Large Flowered Gymnosteris)
- Lepidium davisii* (Davis Peppergrass)
- Mentzelia torreyi* var. *acerosa* (Torrey's Blazing Star)
- Pediocactus simpsonii* var. *robustior* (Simpson's Hedgehog Cactus)
- Scutellaria nana* (Dwarf Skullcap)
- Townsendia scapigera* (Stemless Townsendia)

ALPHABETICAL LISTING OF COMMON NAMES

Christ's Indian Paintbrush (*Castilleja christii*)
Davis Parsley (*Cymopterus davisii*)
Davis Peppergrass (*Lepidium davisii*)
Dwarf Skullcap (*Scutellaria nana*)
Four-Wing Milk-Vetch (*Astragalus tetrapterus*)
Giant Helleborine (*Epipactis gigantea*)
Goose Creek Milk-Vetch (*Astragalus anserinus*)
Large Flowered Gymnosteris (*Gymnosteris nudicaulis*)
Mourning Milk-Vetch (*Astragalus atratus* var. *inseptus*)
Ochre-Flowered Buckwheat (*Eriogonum ochrocephalum* var. *sceptrum*)
Owyhee Mourning Milk-Vetch (*Astragalus atratus* var. *owyheensis*)
Simpson's Hedgehog Cactus (*Pediocactus simpsonii* var. *robustior*)
Stemless Townsendia (*Townsendia scapigera*)
Taper-Tip Onion (*Allium anceps*)
Torrey's Blazing Star (*Mentzelia torreyi* var. *acerosa*)
White Margined Wax Plant (*Glyptopleura marginata*)

LIST OF SPECIES WITH AUTHORITIES

Allium anceps Kellogg

Astragalus anserinus Atwood, Goodrich, & Welsh

Astragalus atratus Wats. var. *inseptus* Barneby

Astragalus atratus var. *owyheensis* (Nels. & Macbr.) Jones

Astragalus tetrapterus Gray

Castilleja christii N. Holmgren

Cymopterus davisii R.L. Hartman

Epipactis gigantea Douglas ex Hook.

Eriogonum ochrocephalum Wats. var. *sceptrum* Reveal

Glyptopleura marginata D.C. Eat.

Gymnosteris nudicaulis Gooding

Lepidium davisii Rollins

Mentzelia torreyi var. *acerosa* Gray

Pediocactus simpsonii (Engelm.) Britt. & Rose var. *robustior* Coult.

Scutellaria nana A. Gray

Townsendia scapigera D.C. Eat.

LIST OF SPECIES BY STATUS

Federal Category 1 (C1)

Castilleja christii

Federal Category 2 (C2)

Astragalus anserinus

Astragalus atratus var. *inseptus*

Lepidium davisii

State Priority 1

Glyptopleura marginata

State Priority 2

Allium anceps

Astragalus tetrapteris

Epipactis gigantea

Mentzelia torreyi var. *acerosa*

State Sensitive

Astragalus atratus var. *owyheensis*

Cymopterus davisii

Gymnosteris nudicaulis

Pediocactus simpsonii var. *robustior*

State Review

Eriogonum ochrocephalum var. *sceptrum*

Scutellaria nana

Townsendia scapigera

Plant Distribution by Soil Characteristics

Dried Mudflat or Playa

Allium anceps

Lepidium davisii

Volcanic Ash

Astragalus anserinus

Astragalus tetrapterus

Eriogonum ochrocephalum var. *sceptrum*

Mentzelia torreyi var. *acerosa*

Fine Alluvial Sand

Glyptopleura marginata

Gymnosteris nudicaulis

Pediocactus simpsonii var. *robustior*

Townsendia scapigera

Shallow, Rocky

Pediocactus simpsonii var. *robustior*

Scutellaria nana

Subalpine to Alpine

Castilleja christii

Cymopterus davisii

Shallow Clay Over Basalt

Astragalus atratus var. *inseptus*

Calcareous Hot/Cold Springs

Epipactis gigantea

Sagebrush Hillsides (deeper soils than var. *inseptus*)

Astragalus atratus var. *owyheensis*

Allium anceps (Taper-tip Onion)

Family: Liliaceae (Lily)

Status: Priority 2 on the State Sensitive Plant List.

Known Locations: Twin Falls County, Idaho
NE California
Nevada
SE Oregon

sites in or near Burley District

T12S, R18E, Sec. 10 SESE 3.5 miles S of Rock Creek townsite

T14S, R15E, Sec. 31 E side of Salmon Falls Creek Reservoir

T15S, R15E, Sec. 5, 8

Soil Type: Heavy soils of volcanic origin in swales, where water stands in spring. Also known from at least one playa perimeter (non-alkaline).

Habitat and Ecology: A perennial found in low-lying, sparsely vegetated areas where water stands in the spring. Associated species include low sage and Eriogonum microthecum. At the playa, it is associated with basin big sage and Astragalus calycosus. In Idaho it is known from 4600 to 5050 feet, but undoubtedly spans a broader elevational range since only three sites are known. First reported for Idaho in 1979. Blooms in May and early June.

Threats: Range improvement projects

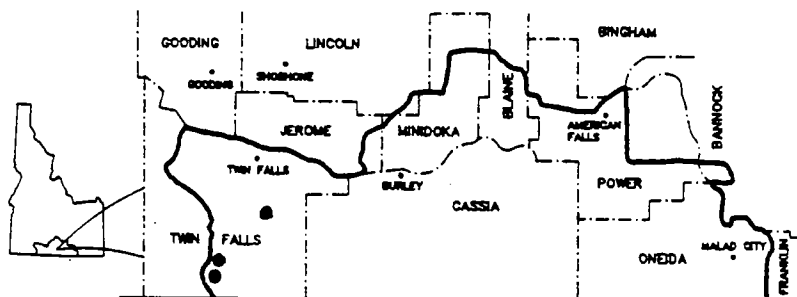
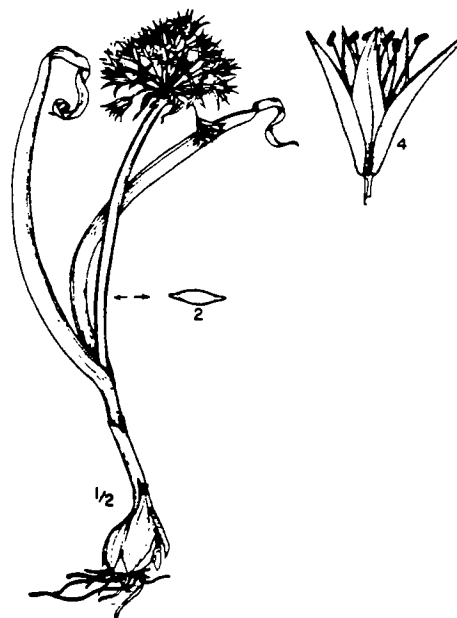
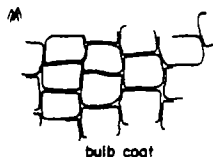
Key Characteristics

Flowers pinkish

Leaves two, flattened

Tepals slender, linear to lance-linear

Stamens inserted



BURLEY DISTRICT

Astragalus anserinus (Goose Creek Milk-Vetch)

Family: Fabaceae (Legume)

Status: Federal Category II (C2) and Sensitive on the BLM Sensitive Plant List.

Known Locations: Cassia County, Idaho
Elko County, Nevada
Box Elder County, Utah

Idaho

T16S, R21E, Sec. 33 N1/2 of SENE near Beaverdam Creek (private land)

Nevada

T47N, R70E, Sec. 29 SW 6 km S of Idaho on the UT-NV line

Utah

T14N, R19W, Sec. 15 SE 6.5 km S of UT-ID line
.5 km E of UT-NV line at Hardister, 7 km S of ID
25.5 km NW of Lynn

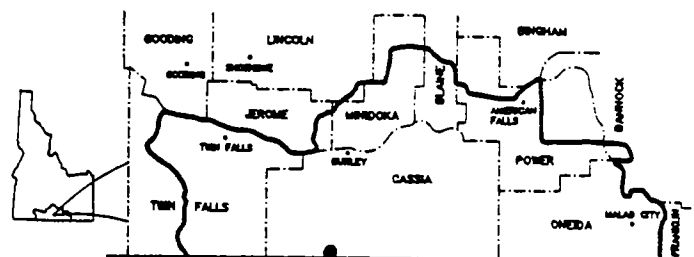
Soil Type: On white tuffaceous ash, usually of outcrops

Habitat and Ecology: A dwarf, matted perennial known at this time only from undeveloped soils of tuffaceous outcrops in the Goose Creek drainage. It was not described until 1984. Associated species include Stipa comata, Eriogonum ovalifolium, and Chrysothamnus viscidiflorus. Also known from juniper communities. Grows at elevations from 4700 to 5000 feet. It is more matted and has smaller flowers than the common A. purshii. The leaves and pods are woolly, but the hairs on A. anserinus are shorter than those of A. purshii. Blooms in May and June.

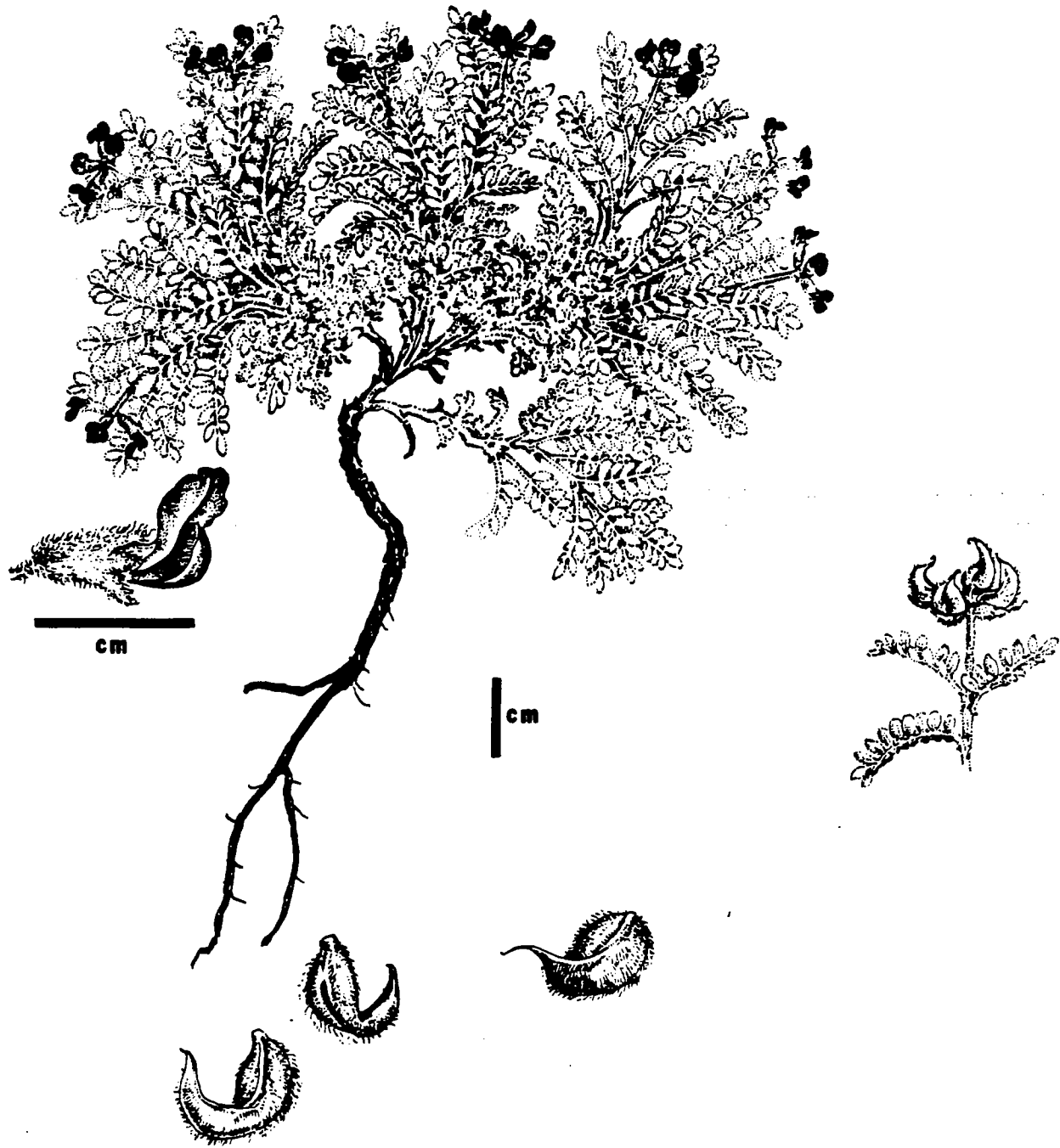
Threats: Off-road vehicles

Key Characteristics

Flowers small, 9-11 mm,
pink-purple in color
Dwarf, matted growth
Tomentose herbage
Pods compressed, curved, and
lightly hairy
Similar to A. purshii, but more
diminutive with shorter hairs



BURLEY DISTRICT



Habit and details of *Astragalus anserinus*

Astragalus atratus var. inseptus (Mourning Milk-Vetch)

Family: Fabaceae (Legume)

Status: Federal Category II (C2) recommended for Threatened status.

Known Locations: Blaine, Camas, Elmore, Gooding, Lincoln, and Twin Falls
Counties, Idaho

sites near Burley District

T6S, R13E, Sec. 20 SE Shoestring Bridge, S of Bliss

T7S, R13E, Sec. 32 Peter's Gulch near Hagerman (var. in question, specimen
immature)

Soil Type: Shallow clay soil over basalt

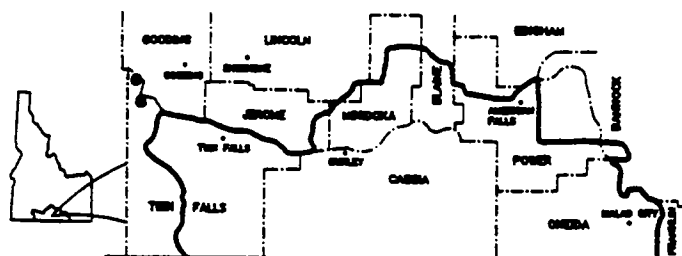
Habitat and Ecology: A wiry, perennial milk-vetch endemic to the mid Snake River Plains of southern Idaho. Flowering stems are decumbent to prostrate. It is usually found in flats and on plains, but also occurs on gentle slopes. At lower elevation sites it occurs with Wyoming sage and low sage, while at higher altitudes it occurs with mountain big sage and A. longiloba. It is also associated with Allium acuminatum, Aster scopulorum and Poa sandbergii. It often occurs within the protection of sagebrush plants. The plant is most common within the Shoshone District, but should be watched for in Burley District, particularly the northwest corner on basalt flats. Collections to verify the variety are best if the fruits are mature. Blooms in May and June.

Threats: Range improvement programs, over grazing, and agricultural development

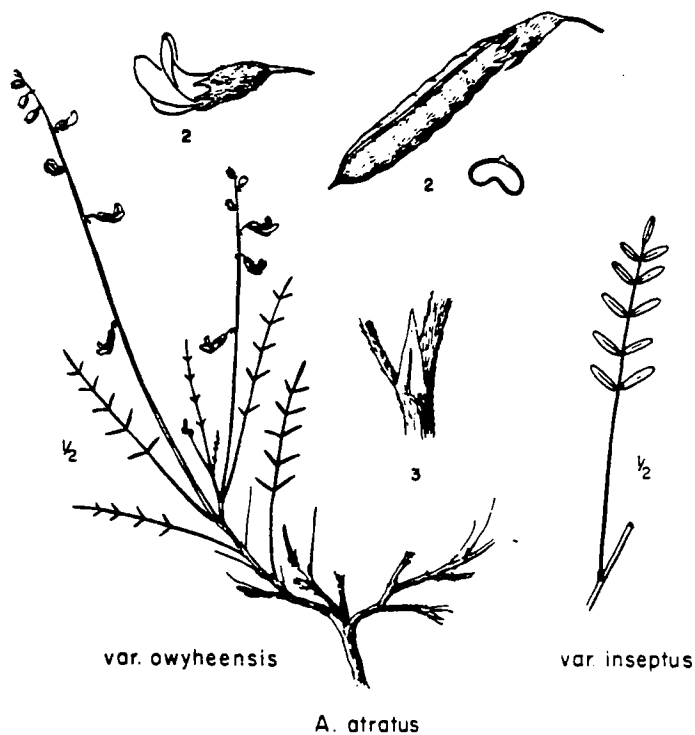
Key Characteristics

Pods red speckled, with
leathery texture
Flowers white, sometimes
faintly lilac-tinged
Leaflets 9-15, terminal
one jointed to the stem

(see key on next page)



BURLEY DISTRICT



Astragalus atratus var. owyheensis (Owyhee Mourning Milk-Vetch)

Family: Fabaceae (Legume)

Status: Sensitive on the BLM and State Sensitive Plant Lists.

Known Locations: Elmore, Owyhee, Twin Falls Counties, Idaho
Baker, Malheur Counties, Oregon
Elko County, Nevada

sites in or near Burley District

T9S, R13E, Sec. 11 Salmon Falls Creek Canyon, 5 miles SW of US #30
T14S, R13E, Sec. 7 E of Devil's Creek
T14S, R15E, Sec. 7 1 mile N of Salmon Falls Dam, on bench above Salmon Falls Creek
16S, R17E, Sec. 30 S of Magic Hot Springs, on sides of Shoshone Creek Cyn.

Soil Type: Sagebrush hillsides with relatively deep, volcanic soils

Habitat and Ecology: A perennial with many very slender, often prostrate and creeping to erect stems. Found on steep hillsides and flats over basalt. usually taking shelter under and entangled in sagebrush. Found from 3,500 to 6,000 feet. Often on bluffs overlooking the Jarbidge, Bruneau, and Owyhee River canyons. Its leaves blend in with the leaves of grass and are not easily noticed. Blooms from May to July.

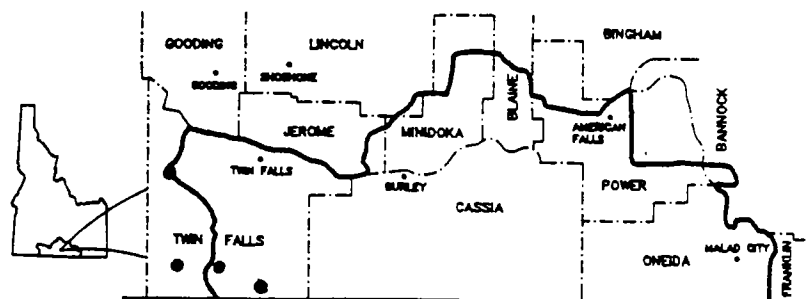
Threats: Range improvement programs, overgrazing, agricultural development

Key to two varieties of Astragalus atratus:

1. Leaflets all very small, narrow, and remote, the terminal one continuous with the rachis or represented by a small dilation of the rachis; pod of papery texture; sagebrush slopes.....var. owyheensis
1. Leaflets more ample and less scattered, the terminal one jointed to the rachis; pod of leathery texture; shallow clay soils where moist in springvar. atratus

Key Characteristics

Flowers whitish, purplish-lined
or tinged and 8-9 mm long
Leaflets 7-11, terminal one
continuous with the stem
Pod 14-20 mm long and 3-4 mm wide
Pod of papery texture



BURLEY DISTRICT

Astragalus tetrapterus (Four-Wing Milk-Vetch)

Family: Fabaceae (Legume)

Status: Priority 2 on the State Sensitive Plant List.

Known Locations: Twin Falls County, Idaho
Northwest Arizona
Eastern Nevada
Southeast Oregon
4 counties in Southwest Utah

Idaho

T16S, R15E, Sec. 8 small drainage east of Salmon Falls Reservoir

Soil Type: Sparsely vegetated ash or sandy alkaline soils

Habitat and Ecology: A perennial milk-vetch that is known from only one site in Idaho. Apparently south-central Idaho is the northern extent of its range. It is found in coarse soils within Wyoming sage habitats as well as pinyon-juniper habitat in Utah and Nevada, from 3500 to 6500 feet. Mostly in exposed places but sometimes taking shelter under or entangled in sagebrush. Barneby states that the plant is widely dispersed but uncommon. This species is highly variable. Collections are needed to determine its range in Idaho. Seen but not collected and verified in the BLM Winnemucca District of Nevada. Blooms from late April through June.

Threats: Off-road vehicles, trampling and overgrazing by wild horses

Key Characteristics

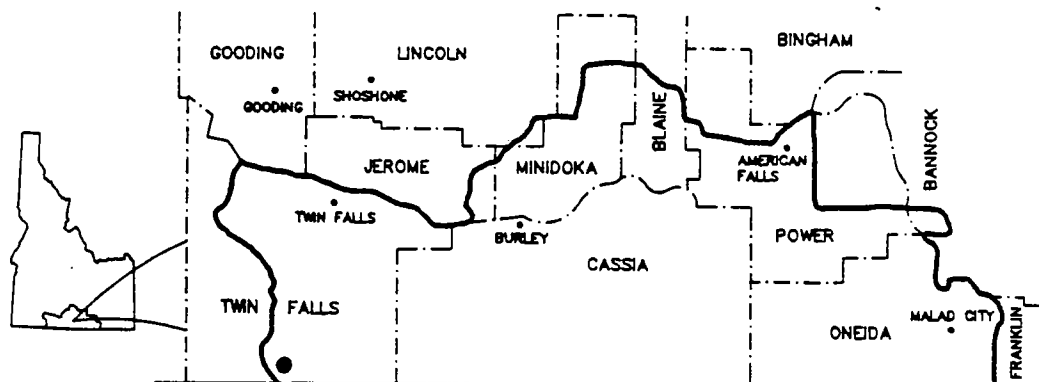
Pods four-sided

Pods pendulous, incurved or
coiled, usually pubescent

Pods 2-4 cm long

Flowers vary in color from white
with lilac tinges to bright pink
purple

Stems and leaves round in cross
section & with pointed tips



BURLEY DISTRICT

Castilleja christii (Christ's Indian Paintbrush)

Family: Scrophulariaceae (Figwort)

Status: Federal Category I (C1) recommended for Endangered status.

Known Locations: Cassia County, Idaho

T13S, R24E, Sec. 4,9 Harrison Mountain, near the top; SE of Burley
(Forest Service administered land)

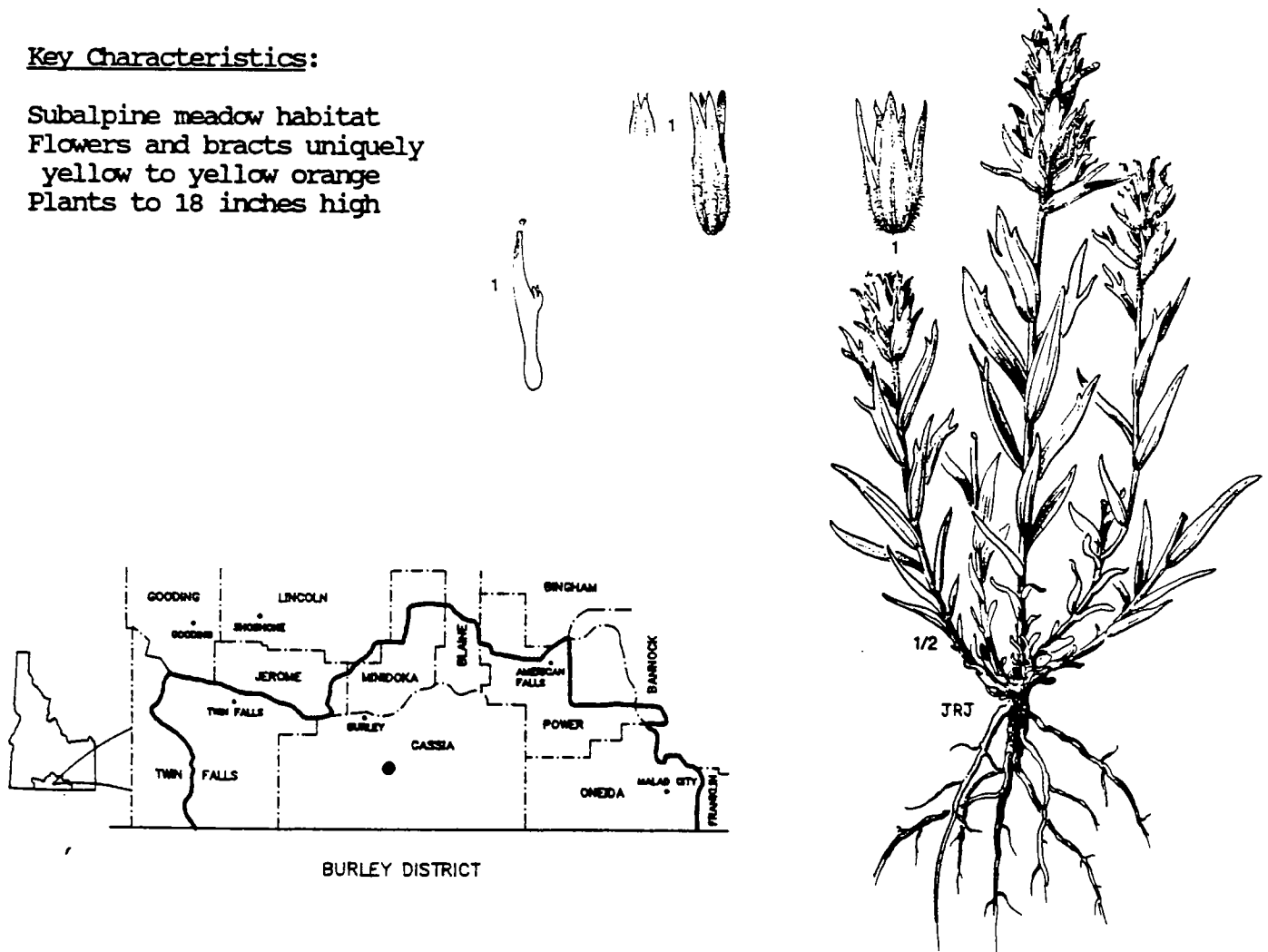
Soil Type: Loamy gravel with quartzite and mica schist stones

Habitat and Ecology: A perennial plant endemic to Harrison Mountain in the Cache Peak Range of the Albion Mountains. It is found in grassy subalpine meadows with Trisetum spicatum, Festuca idahoensis, Solidago multiradiata, Pedicularis contorta, and Achillea millefolium. Elevation is 9000 to 9300 feet, on Sawtooth National Forest land. The species was described by Noel Holmgren in 1973, who unsuccessfully searched the neighboring mountains and adjacent peaks in the same range. It is locally abundant on Harrison Mtn. Blooms in July.

Threats: Additional radio relay or lookout facilities, and possibly grazing

Key Characteristics:

Subalpine meadow habitat
Flowers and bracts uniquely
yellow to yellow orange
Plants to 18 inches high



Cymopterus davisii (Davis' Parsley)

Family: Apiaceae (Carrot)

Status: Sensitive on the State and BLM Sensitive Plant Lists.

Known Locations: Cassia County, Idaho

T13S, R24E, Sec. 1,4,9 NE near the summit of Harrison Mountain

T14S, R24E, Sec. 20 NE, 21 SW pass between Mt. Independence and Cache Peak

Soil Type: Gravelly disturbed sites or rock outcrops of granitic and quartzite substrate.

Habitat and Ecology: A low-growing, herbaceous perennial known only from the Cache Peak Range of the Albion Mountains. It is locally abundant on grassy slopes or rock outcrops of alpine areas on Harrison Mountain and Cache Peak. This plant probably does not occur on BLM lands, but it should be watched for when examining higher elevation sites. Blooms in July, with fruiting in late July through August.

Threats: Expansion of radio relay or lookout facilities

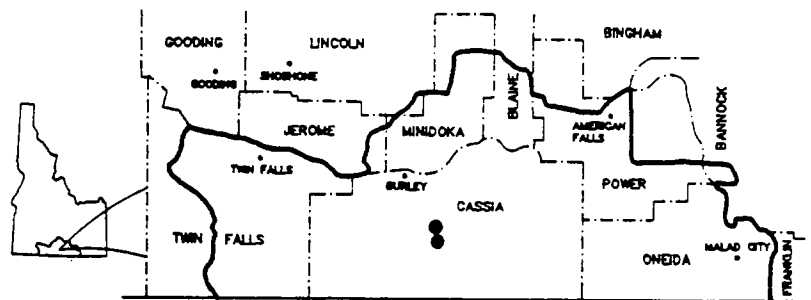
Key Characteristics

Flowers yellow

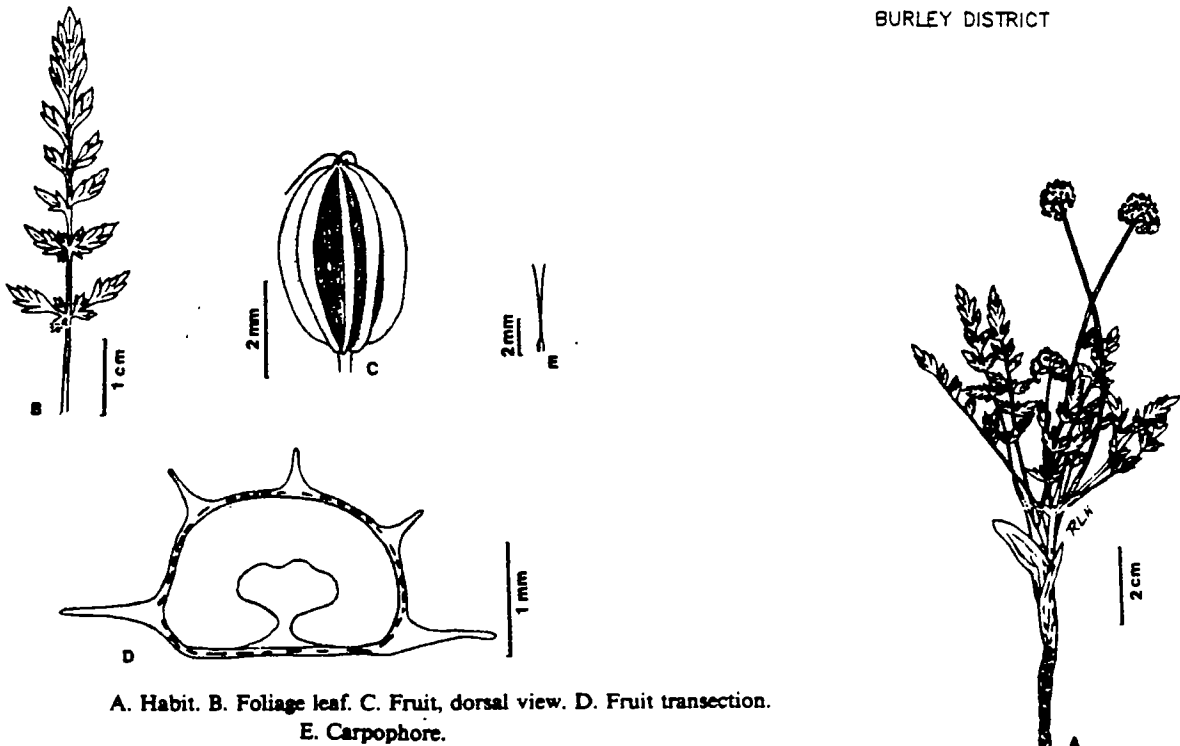
Fruits densely granular-roughened

Ultimate leaf divisions 3.5-15 mm
or more long

2-16 cm tall



BURLEY DISTRICT



A. Habit. B. Foliage leaf. C. Fruit, dorsal view. D. Fruit transection.
E. Carpophore.